# Portrait of Great Teachers: Lessons for and from Singapore

Associate Professor Ee-Ling LOW
Head, Strategic Planning & Academic Quality
Director's Office
National Institute of Education, Singapore

NATIONAL INSTITUTE OF EDUCATION SINGAPORE

An Institute of NANYANG TECHNOLOGICAL UNIVERSITY

TRANSFORMING TEACHING
INSPIRING LEARNING

Singapore

- A small country with limited resources
- **Human resource** is seen as the country's most important asset
- **Education** seen as the key enabler to build the nation and equip its people with 21st CC

Singapore's Education Sector

$11.6 billion in 2013

33,000 education officers

Over **350** schools
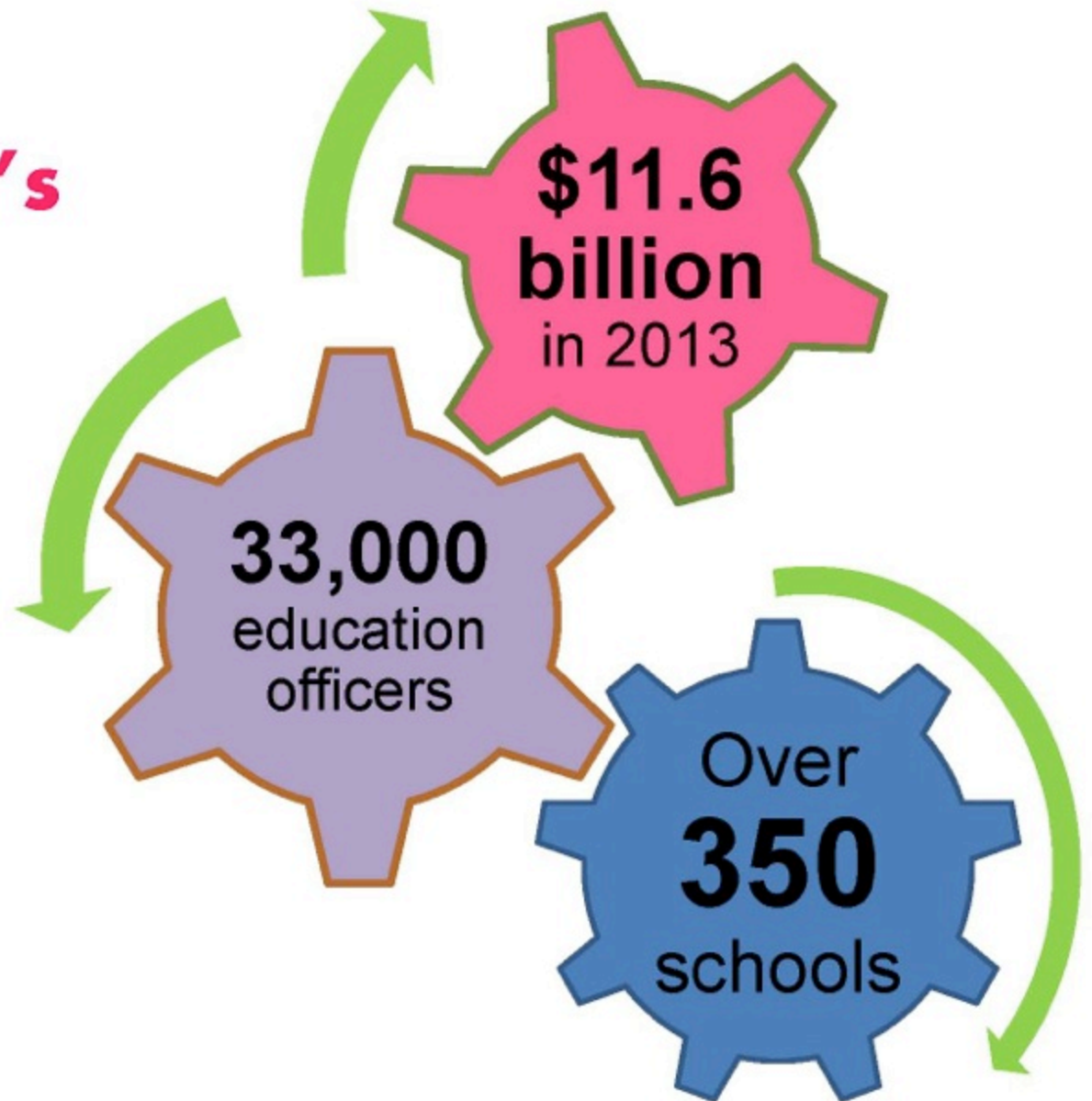
A system that stands out...

2nd in "Quality of the Educational System" (Global Competitiveness Report 2011–2012)

One of the world's best-performing school systems (McKinsey Report, published November 2010)

Ranked among the top

- Reading, Mathematics and Science (PISA 2009)
- Mathematics and Science (TIMSS 2011)
- Literacy (PIRLS 2011)
- 2013 International Physics, Mathematics, Chemistry, Biology and Informatics Olympiads

Singapore students ready for the 21st Century

FINDINGS FROM THE 2012 PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT (PISA*)

Ministry of Education
SINGAPORE

Strong in Applying Knowledge and Skills

Of the 65 participating education systems in paper based assessments, Singapore was ranked among the top five

MATHEMATICS LITERACY SKILLS
Shanghai . Singapore . Hong Kong
Chinese Taipei . Korea

READING LITERACY SKILLS
Shanghai . Hong Kong . Singapore
Japan . Korea

SCIENCE LITERACY SKILLS
Shanghai . Hong Kong . Singapore
Japan . Finland

Of the 32 participating education systems in computer-based assessments, Singapore was also ranked among the top five

MATHEMATICS LITERACY SKILLS
Singapore . Shanghai . Korea
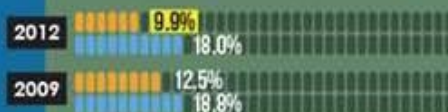Hong Kong . Macao

READING LITERACY SKILLS
Singapore . Korea . Hong Kong
Japan . Canada
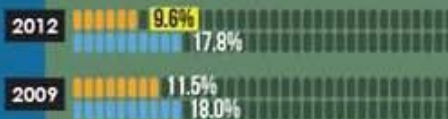
Fewer Students Who Are "Low Performers"

LOW PERFORMERS IN MATHEMATICS
Year	Singapore	OECD average
2012	8.3%	23.0%
2009	9.8%	22.0%

LOW PERFORMERS IN READING
Year	Singapore	OECD average
2012	9.9%	18.0%
2009	12.5%	18.8%

LOW PERFORMERS IN SCIENCE
Year	Singapore	OECD average
2012	9.6%	17.8%
2009	11.5%	18.0%

■ Singapore ■ OECD¹ average

More Students Who Are "High Performers"

HIGH PERFORMERS IN MATHEMATICS
Year	Singapore	OECD average
2012	40.0%	12.6%
2009	35.6%	12.7%

HIGH PERFORMERS IN READING
Year	Singapore	OECD average
2012	21.2%	8.4%
2009	15.7%	7.6%

HIGH PERFORMERS IN SCIENCE
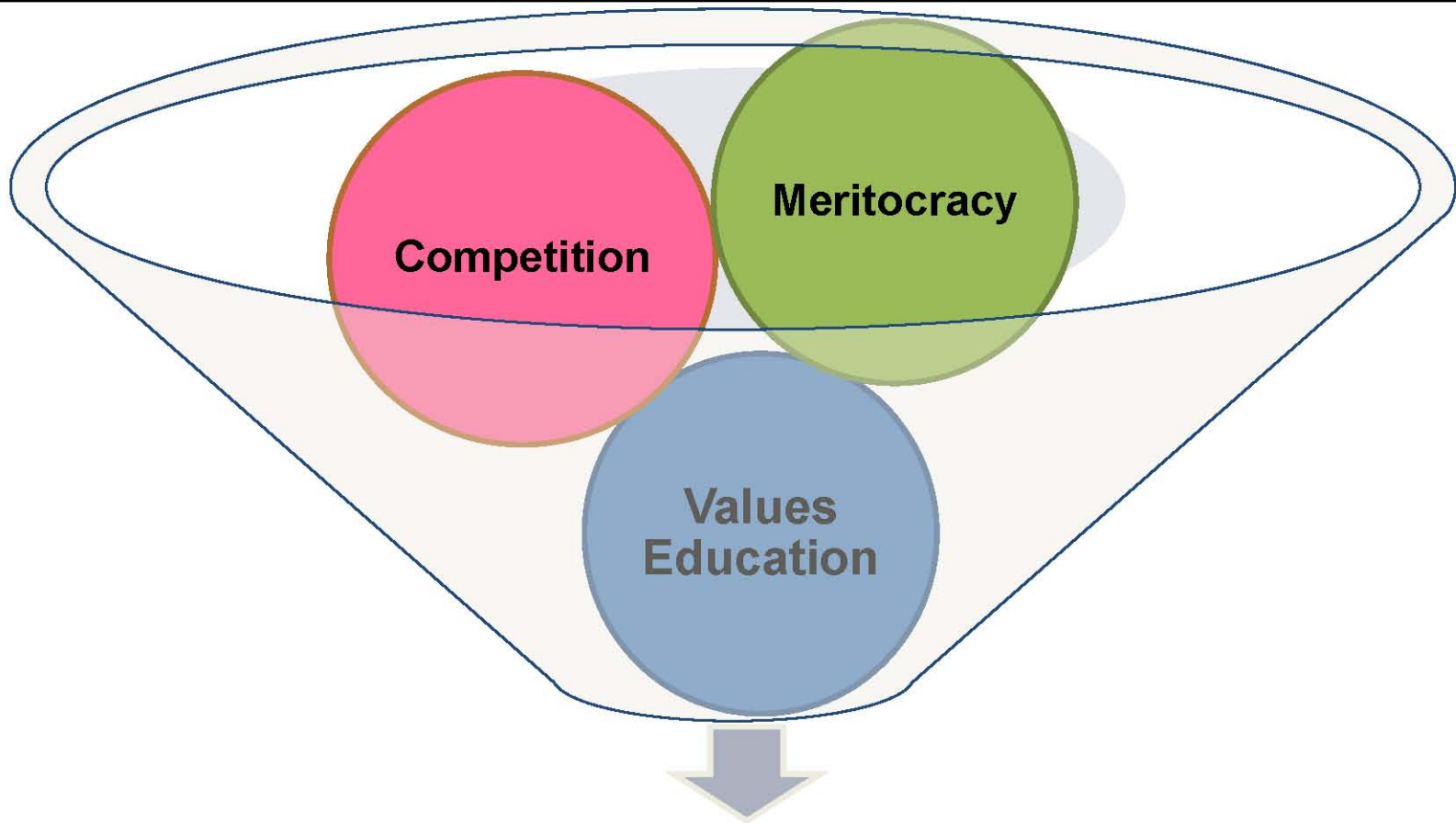| Year	Singapore	OECD average
2012	22.7%	8.4%
2009	19.9%	8.5%
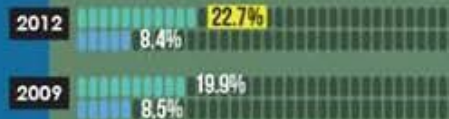
■ Singapore ■ OECD¹ average

¹Organisation for Economic Cooperation and Development
* PISA is a triennial international study by the Organisation for Economic Cooperation and Development of 15-year-old students' performance in mathematics, reading and science.
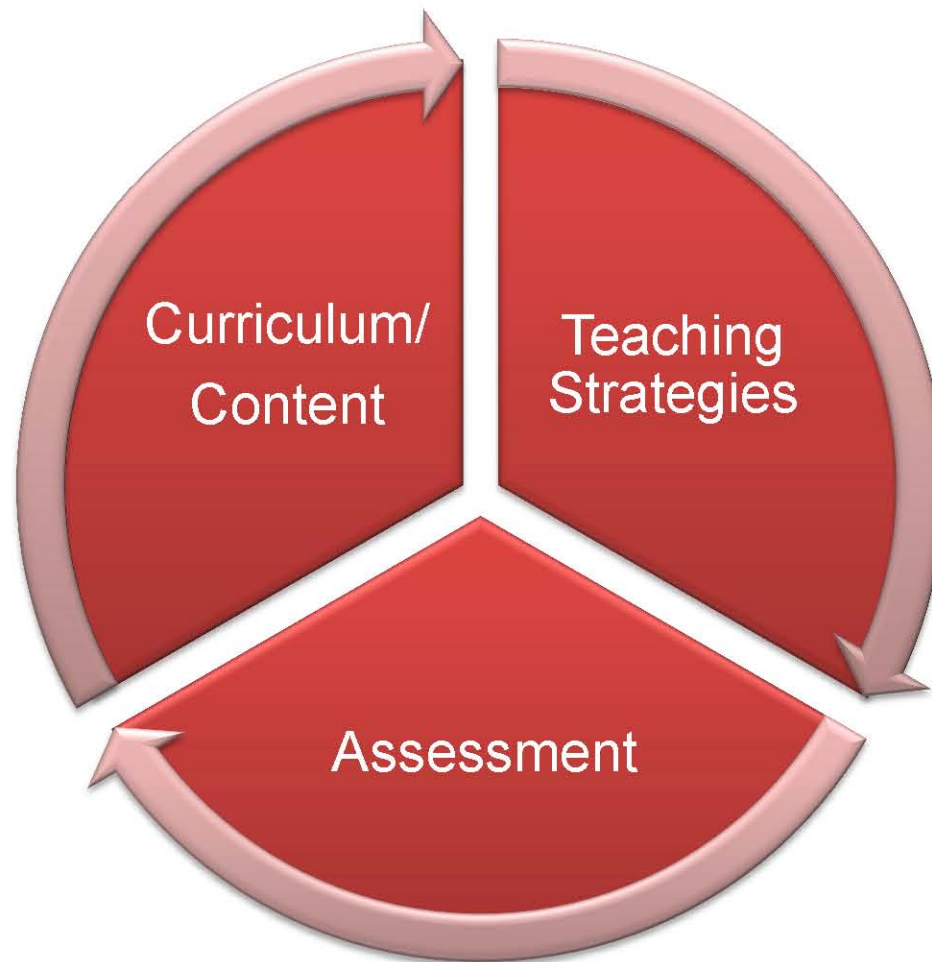
Broad-based & Holistic Education Supported by Student-Centric, Values-Driven Education

www.moe.gov.sg

Strong culture of respect for learning and hard work

Meritocracy

Competition

Values Education

Holistic Development

Rigour and Standards of Curriculum; Good Pedagogies

Curriculum/ Content

Teaching Strategies

Assessment

English-knowing Bilingualism

English

as the main medium of instruction in school

All students learn a

Mother Tongue Language

Strong emphasis on Mathematics and Science

To equip students with the <u>basic knowledge</u> and <u>analytical skills</u> to move Singapore <u>up the value-chain</u>, and retain our <u>competitive advantage</u> in a <u>globalised knowledge-based economy</u>.

ICT-infused Curriculum

ICT Masterplan

First Phase (1997–2002) laid a strong foundation for schools to harness ICT

Second Phase (2003–2008) strived for a more pervasive use of ICT in education

Third Phase (2009-2014) aims to harness ICT effectively for finer customization in learning and strengthen students' competencies for the 21st century

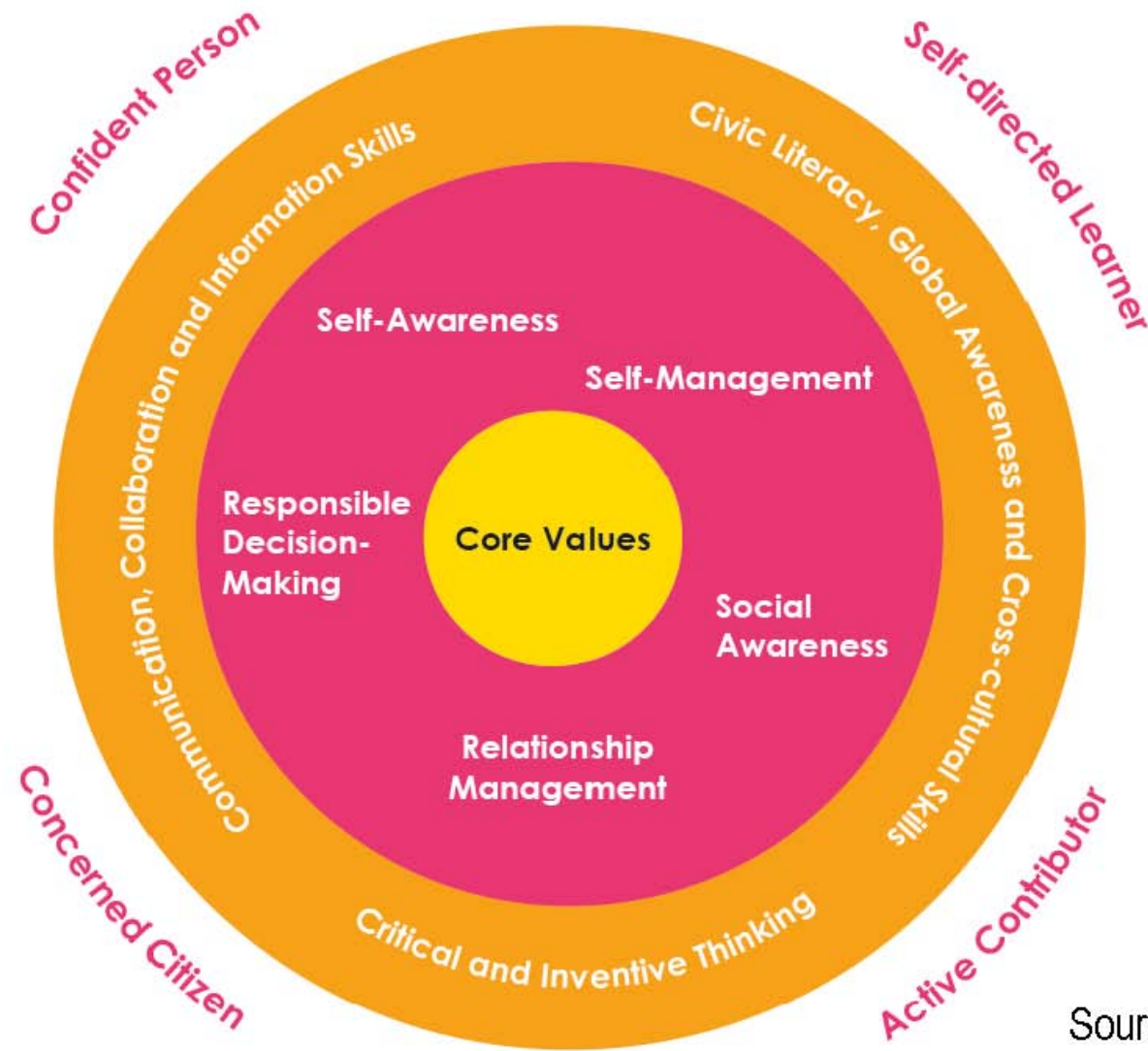Source: MOE

ICT-infused Curriculum

In 2006, the **FutureSchools@Singapore** programme was launched to **fully harness ICT** and **push the frontiers of learning and teaching** at a school-wide level.

Provide possible models for the **seamless and pervasive integration of information-communication** into the **curriculum and pedagogy for engaged learning** in schools

Strong Focus on Holistic Education

Exposure to non-academic activities, community service, adventure camps and overseas immersion experiences

21ˢᵗ Century Competencies and Desired Student Outcomes

Source: MOE, 2014

Good Quality Teachers & School Leaders

How does Singap●re ensure and sustain a high quality teaching force?

Recruitment & Selection

Ensuring the best candidates for the profession

How?

Top 30% of each cohort

SELECTION INTERVIEW

1 in 8 success rate

Screen for aptitude, attitude & personality

EARLY SOURCING FOR TALENT

Teacher Internship Scheme for Years 11 & 12

TEACHING SCHOLARSHIP

300 Teaching Scholarships a year tenable locally or abroad

Recruitment & Selection

CV Screen	• *Check for minimum qualifications:* — Academically, applicants should be in the top 30% of their age cohort — Applicants should have completed relevant school and university education — Applicants must show evidence of interest in children and education
Assessment tests	• *Check literacy:* — Applicants must have a high level of literacy — Evidence shows that teachers literacy effects achievement more than any other measurable variable
Interviews	• *Check attitude, aptitude and personailty:* — Conducted by a panel of three experienced headmasters — May include practical tests or activities
Monitoring at NIE	• *Check attitude, aptitude and personailty:* — Teachers are monitored during their initial teacher training at NIE — A small number of candidates who do not demonstrate the required standards are removed from the course

Source: McKinsey & Co (2007)

Teachers as Nation Builders
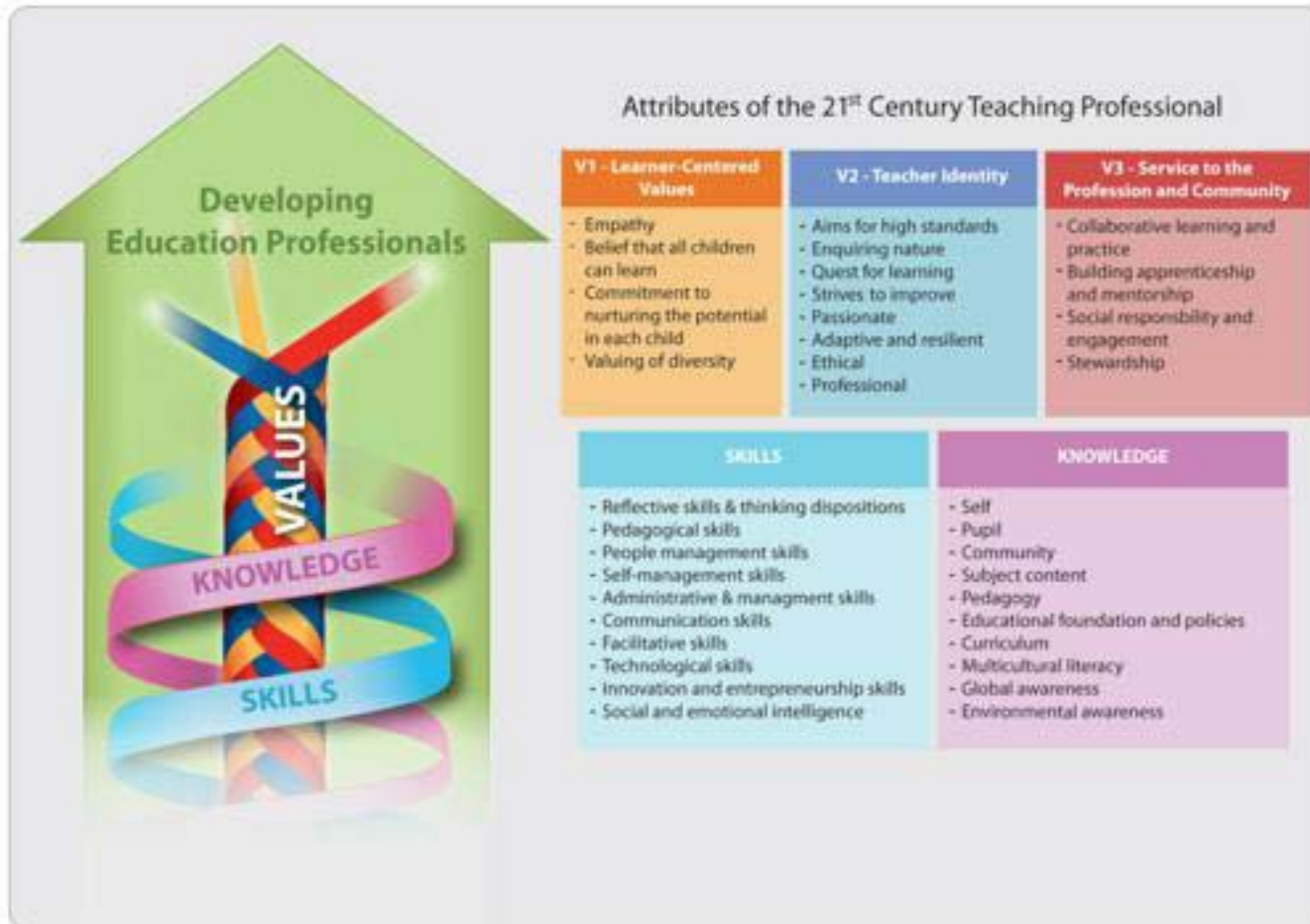
"Moulding the Future of our Nation"

Recruitment & Selection

Paid pre-service education

including a monthly salary

Competitive salaries

equivalent to that of a beginning accountant or engineer (Roughly between USD$30K-50K for a graduate)

Mid-career entrants

Salaries pegged to previous working experiences

Rigorous Pre-Service Programme: Values-Driven Philosophy

Developing Education Professionals

VALUES
KNOWLEDGE
SKILLS

Attributes of the 21st Century Teaching Professional

V1 - Learner-Centered Values
- Empathy
- Belief that all children can learn
- Commitment to nurturing the potential in each child
- Valuing of diversity

V2 - Teacher Identity
- Aims for high standards
- Enquiring nature
- Quest for learning
- Strives to improve
- Passionate
- Adaptive and resilient
- Ethical
- Professional

V3 - Service to the Profession and Community
- Collaborative learning and practice
- Building apprenticeship and mentorship
- Social responsibility and engagement
- Stewardship

SKILLS
- Reflective skills & thinking dispositions
- Pedagogical skills
- People management skills
- Self-management skills
- Administrative & management skills
- Communication skills
- Facilitative skills
- Technological skills
- Innovation and entrepreneurship skills
- Social and emotional intelligence

KNOWLEDGE
- Self
- Pupil
- Community
- Subject content
- Pedagogy
- Educational foundation and policies
- Curriculum
- Multicultural literacy
- Global awareness
- Environmental awareness

Graduand Teacher Competencies Framework
a set of specified outcomes for pre-service Teacher Education

Performance Dimensions	Core Competencies	
Professional Practice	1. Nurturing the child	CB
	2. Providing quality learning of child	CB
	3. Providing quality learning of child in CCA	CB
	4. Cultivating knowledge:	
	i. with subject mastery	CB
	ii. with reflective thinking	CB
	iii. with analytic thinking	CB
	iv. with initiative	AR
	v. with creative teaching	AR
	vi. with a future focus	AR
Leadership & Management	1. Winning hearts & minds	
	i. Understanding the environment	AR
	ii. Developing others	AR
	2. Working with others	
	i. Partnering parents	AR
	ii. Working in teams	CB
Personal Effectiveness	1. Knowing self and others	
	i. Tuning into self	CB
	ii. Exercising personal integrity	AR
	iii. Understanding and respecting others	CB
	iv. Resilience and adaptability	CB

The competence expected of graduating teachers are specified in two focus levels:

**Capacity building (CB)** – demonstrate achievement of the defined competence

Awareness raising (AR) – aware of what the competence means but not yet able to fully demonstrate

Mapping of courses to the V3SK and GTCs
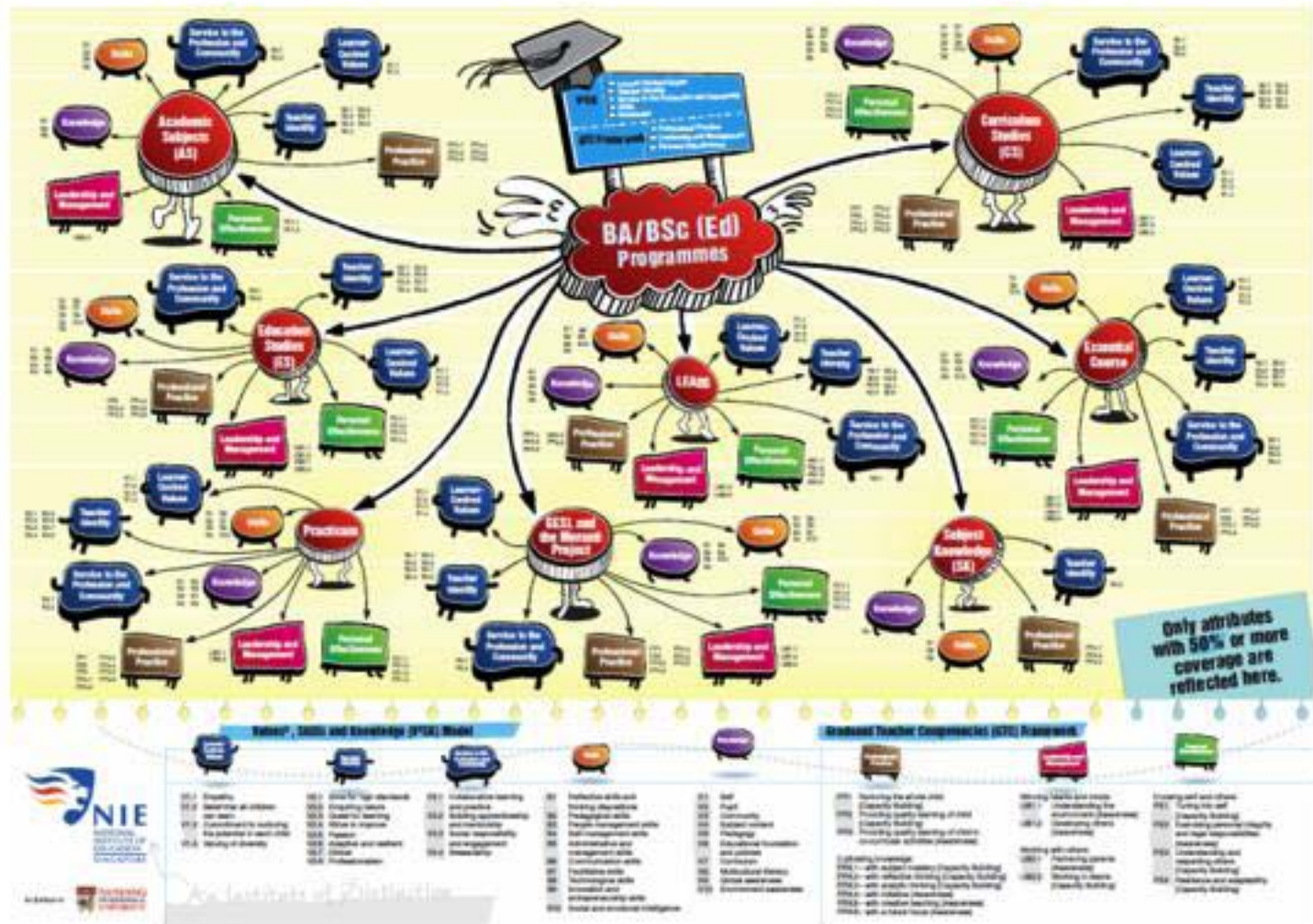
Helps student teachers to see the coherence between the different components of the pre-service courses

Mapping of courses to the V3SK and GTCs

BA/BSc(Ed)
The Student-Teacher's
Learning Journey in
TE²¹
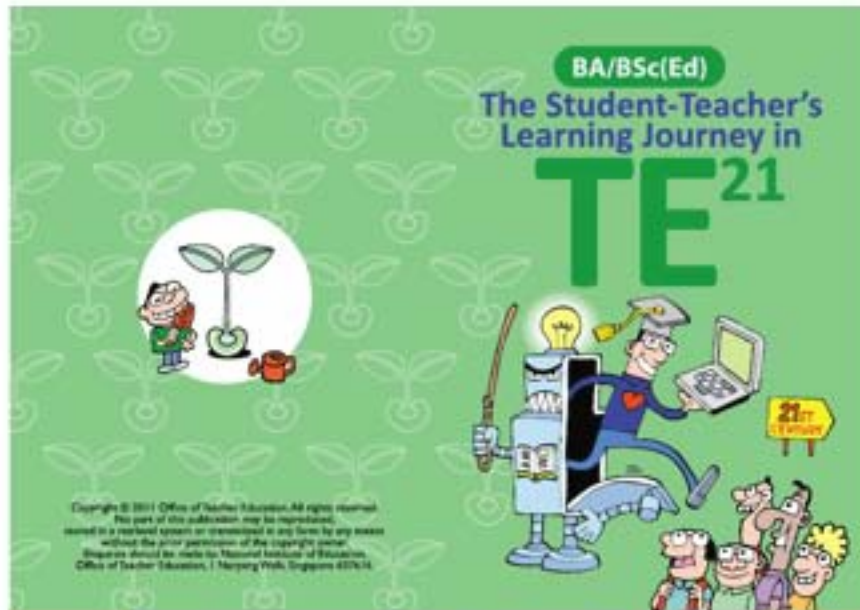
The mapping exercise ultimately let to a deeper understanding of the learning journey from the student teacher's perspective – in terms of what they learnt and how they learnt.

Crucial that every student teacher understood what were the expected outcomes from each course they would be taking.

A series of Student Teacher's Learning Journeys (STLJ) were created. This is meant to guide student teachers in their reflections and enable them to relate their experiences from classroom lessons through to teaching practice to the objectives of each course.

Learning and Teaching Portfolio at NIE

Developmental Portfolio is an electronic collection of **authentic** and **diverse evidence** of a student teacher's **learning** and **achievement** over time, on which he/she has **reflected** and designed for personal **development**, as well as for **presentation** to audiences for specific purposes.

LEARNING PORTFOLIO

Pre-service training

➜

SHOWCASING PORTFOLIO

Practicum Induction of BT

➜

TEACHING PORTFOLIO

Beginning Teacher Trained teacher

Holistic Teacher Evaluation, Holistic Growth

Identifying areas for further professional development and upgrading

PURPOSE
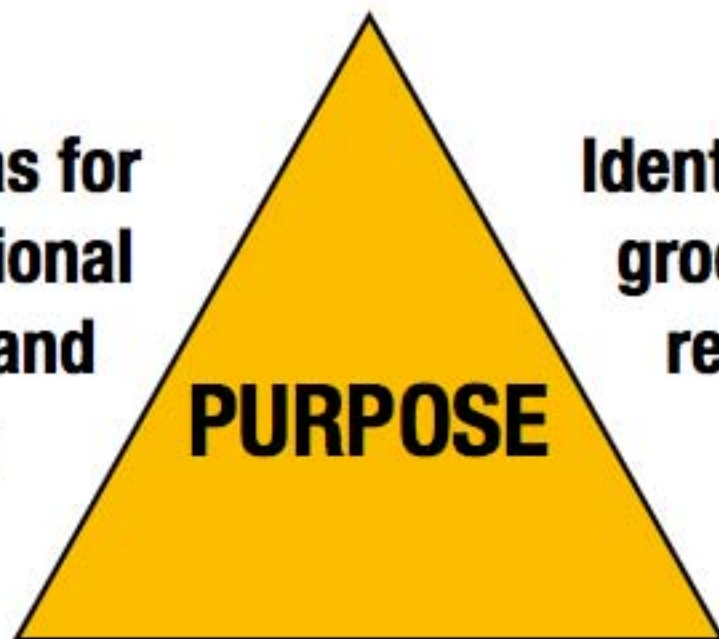
Identifying talent for grooming so as to retain our best teachers

Uphold the quality of teaching and integrity of the profession.

Enhanced Performance Management System (EPMS)

A tool for Self-Evaluation

A tool for Coaching & Mentoring

EPMS

Performance-Linked Recognition

Non-monetary Rewards

Enhanced Performance Management System (EPMS)

A tool for Self-Evaluation

Beyond value-adding to students' academic performance, it also includes for example, teachers' ability to nurture the whole child, their training and development roadmaps and their contribution to overall school improvement.

Enhanced Performance Management System (EPMS)

A tool for Coaching & Mentoring

The work review cycle begins with a one-on-one target setting at the start of the year conducted with the teacher's immediate supervisor, followed by a mid-year work review that is formative in nature, before the end-of-year summative review. Helps specify areas for improvement, developmental and career pathways are mapped.

Enhanced Performance Management System (EPMS)

Performance-Linked Recognition

1. Competencies are defined

2. Teachers are rated using a distribution guidelines

3. Wage implications are then triggered

4. Non-performing teachers leave

1. **Competencies are defined** identifying the skills and knowledge expected. Detailed descriptions of the competencies, and suggestions for improvement, are provided

2. **Distribution guidelines** are approximately normal, allowing differentiation between performance levels

3. - A-rated teachers get bonus of up to 3.25 months salary (bonus pool varies by year)
   - C-rated teachers' average bonuses are equivalent to their salary for 1.5 months

4. - E-graded performers put in a performance review for 6-9 months (termination possible)

McKinsey & Co (2009)

Enhanced Performance Management System (EPMS)

Non-monetary Rewards

Via awards such as the Outstanding Youth in Education (OYEA), the Caring Teacher Award (CTA) and the President's Award for Teachers (PAT) in order to retain good teachers in the profession. MOE disburses grants in the form of outstanding contribution awards (OCA) to their deserving teachers. Quantum of about USD $3000 for individuals and between USD $3000 - $10000 for teams.

Teacher Professional Development

Systemic Enablers | Structure

100 hours of paid PD	After 12 years, entitled to 1 school term of PDL
Pursue postgraduate studies	Principals who have served 6 years can take 2 months of Sabbatical

Teacher Professional Development

Leave and Financial Support

Different Professional Development Packages (PDPs) are offered for teachers to upgrade themselves through further studies.

Teacher's Work Attachments (TWA) are open for educators to gain industry exposure and broaden their perspectives via attachments to public or private sector organisations.

Teachers are also provided resources (in the form of a sum of money) under the **Learning and Development Scheme** (LDS) teachers are given $400 ($700 after the 15th year in service) to enable them to invest in activities or tools that would aid their professional development.

Academy of Singapore Teachers

AST was set up in 2010 to represent and champion professional excellence for the teaching fraternity, by establishing a shared culture of professionalism among teachers. The AST's mission is to facilitate greater teacher ownership and leadership in the profession.

Academy
of Singapore Teachers
lead. care. inspire.

TEACH framework

ENGAGEMENT

- Dedicated HR Partners for School Leaders
- Multiple Engagement Points for Teachers

ASPIRATIONS

- Better Support for Part-Time Masters
- Additional Advanced Diploma Offerings
  - New Study Awards (Postgraduate and Undergraduate)

TEACHER PROFESSIONALISM

- Ethos of Teaching Profession
- Subject Chapters
- Professional Learning Communities

CAREER

- Wider Choice of Key Personnel Positions in Schools
- More Expertise-Building HQ Positions

HARMONY

- Part-Time Teaching Scheme Expansion
- Enhanced No-Pay Leave Scheme
- Work Management Guidelines

http://www.moe.gov.sg/media/press/2011/03/new-teach-framework-to-enhance-quality-teaching-force.php

TEACH framework

TEACH stands for Teacher–professionalism based on a self-led culture of professional development; better Engagement by strengthening feedback loops and communication channels with teachers; better alignment with teachers' Aspirations by providing opportunities for academic upgrading; enhancing their Career advancement options by providing more leadership positions in schools; and providing work-life Harmony to retain good teachers.

Teacher Growth Model

Five Desired Outcomes of the 21st century Singapore Teacher
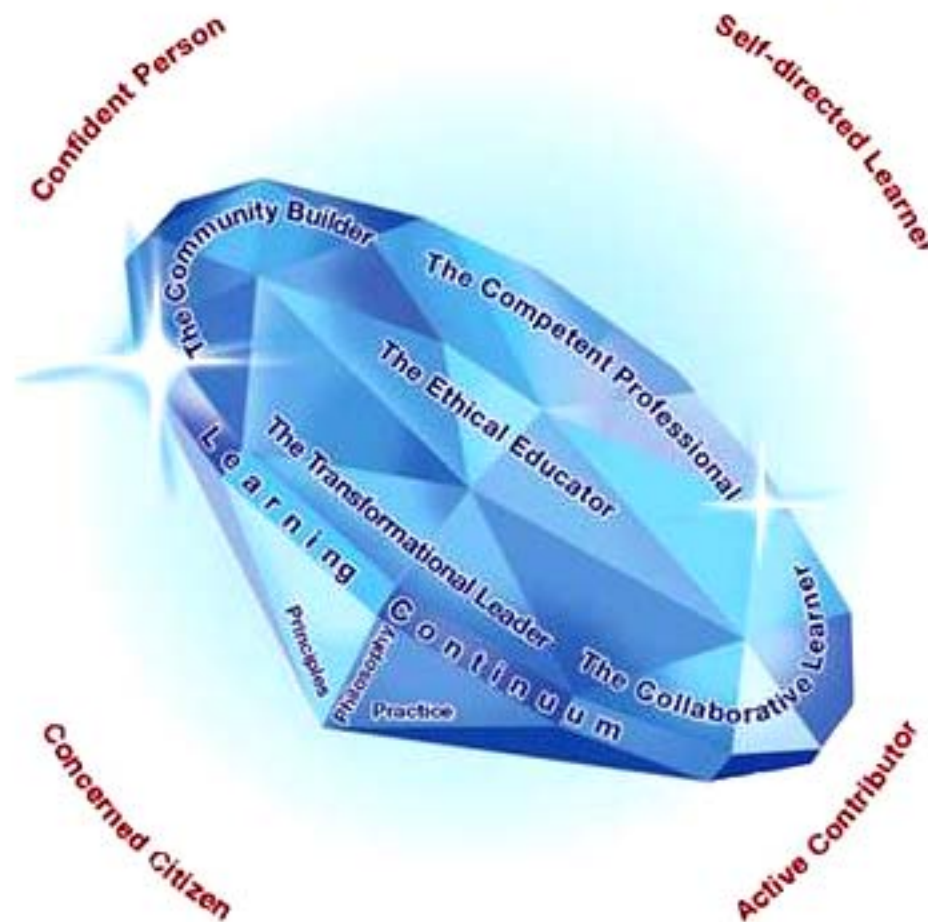
The Ethical Educator

The Competent Professional

The Collaborative Learner

The Transformational Leader

The Community Builder

http://www.academyofsingaporeteachers.moe.gov.sg/professional-growth/learning-frameworks/teacher-growth-model

Teacher Growth Model

The Teacher Growth Model (TGM)

is "a professional development model aimed at encouraging teachers to engage in continual learning, and take ownership of their professional growth and personal well-being" (TGM Fact Sheet, MOE 2012)
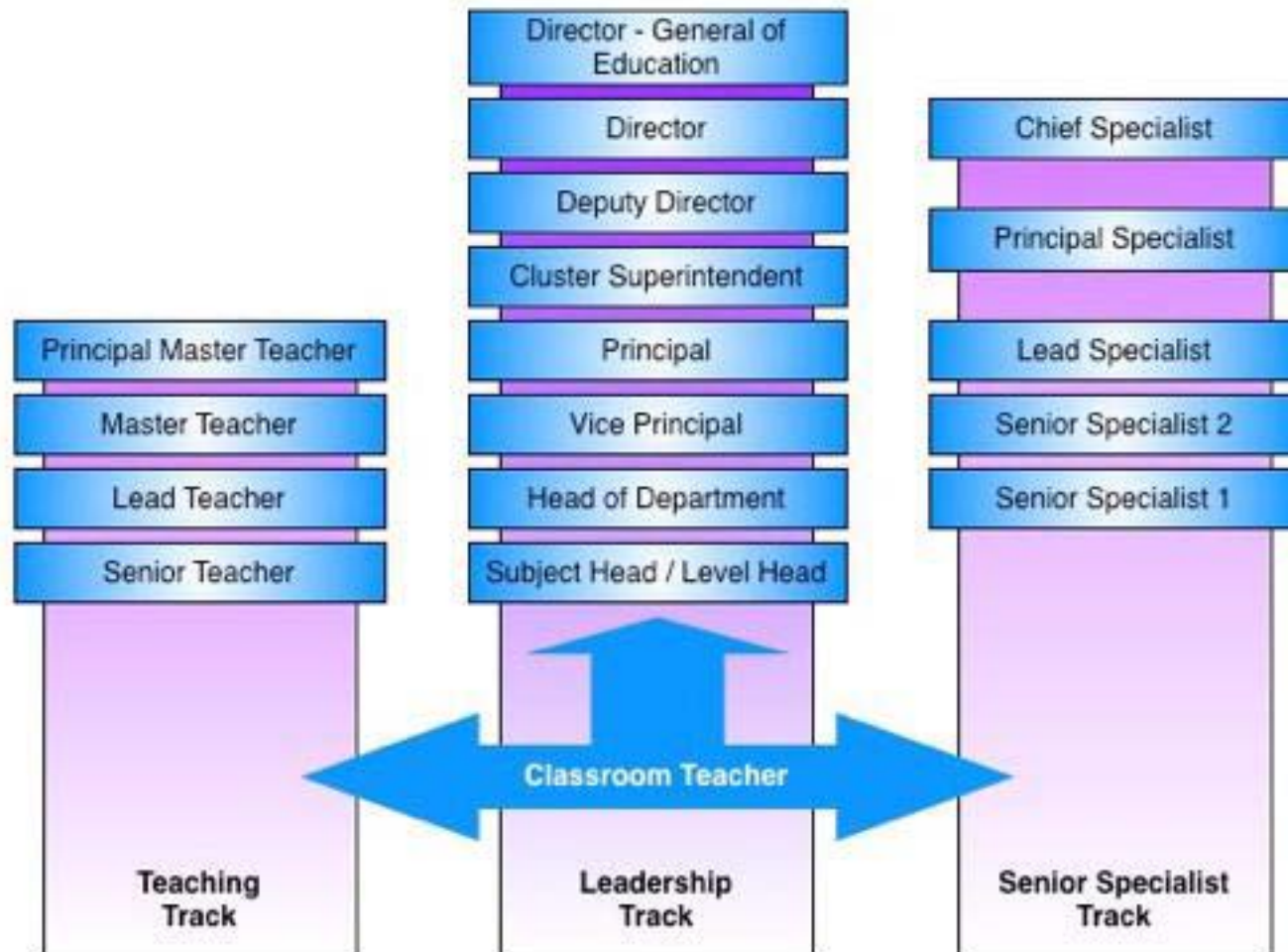
Teacher Growth Model

Teachers plan their learning relevant to their professional development needs and interests.

Learning aligned to what can help them to develop knowledge and skills for nurturing 21st century students.

Multiple modes of learning and delivery are available such as face-to-face courses, electronically-based courses, conferences, mentoring and research-based practice, networked learning, reflective practice, and experiential learning.

Career Progression Tracks

Teaching Track
- Principal Master Teacher
- Master Teacher
- Lead Teacher
- Senior Teacher

Leadership Track
- Director - General of Education
- Director
- Deputy Director
- Cluster Superintendent
- Principal
- Vice Principal
- Head of Department
- Subject Head / Level Head

Senior Specialist Track
- Chief Specialist
- Principal Specialist
- Lead Specialist
- Senior Specialist 2
- Senior Specialist 1

Classroom Teacher

Education Service Professional Development And Career Plan" (Edu-Pac) for teachers

http://www.moe.gov.sg/careers/teach/career-info/

Career Progression Tracks

Teaching track

achieve teaching excellence in the classroom

(which extends through levels of senior, lead and master teachers)

Leadership track

grooms teachers to take on leadership positions in schools (e.g. principals and heads of department) and at the MOE headquarters

Senior specialist track

teachers are developed to be experts in curriculum and instructional design, educational psychology and guidance, educational testing and measurement, and research and statistics

Retention

Attrition is less than 3% annually

Remuneration packages include **a** **retention bonus** payable every 3-5 years, and a lump sum withdrawal option at the end of a teacher's career, so as to provide reasonably competitive career earnings by the time educators reach the age of 40 or 50.

Teachers' salaries have been revised upwards by MOE in 2001, 2006 and 2007 & in 2012.

Teacher Evaluation & Student Learning Outcomes

Teacher evaluation is a vital step in the drive to improve the effectiveness of teaching and learning.

Raising student performance lead to substantial gains in student learning

Effective monitoring and evaluation of teaching central to the continuous improvement of the effectiveness of teaching.

Reflections on the Singapore Story

Selecting & attracting top quality educators

Competitive compensation & career development packages

Professionalism of the teaching profession

School Leadership Development

Systemic Coherence

Learning from other systems

Reflections on the Singapore Story

"Judicious Policy-making that is evidence-informed & fidelity in implementation through systemic coherence"

What Singapore can learn from other systems: Challenges ahead

How to unleash greatness? Creativity/ Innovation etc.

How to ensure our students emerge with the right values for the 21C?

How to continually level out the 'tail-end' performers?

How to attain a level of proficiency in English that is as good as other English-speaking countries?

How do we realize the vision that every school IS indeed a good school?

How to stay globally relevant and competitive?

THANK
YOU